Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended). In a method for producing a hardened and/or hard-sintered, annularly axially symmetrical sintered shaped part based on iron with internal toothing, including undercuts in a tooth flank region and, optionally, functional recesses in ~~a~~ the tooth region, wherein the manufacturing sequence includes the steps of powder pressing, sintering, mechanical forming of the undercuts, and hardening, the improvement which comprises:

producing undercuts with open-pored surfaces on the shaped part by milling prior to hardening the shaped part or on ~~the~~ a pre-sintered shaped part;

thereby moving a milling cutter axis along a hypocycloid path defined with cusps and ~~effecting a contact cutting action~~ contact-cutting the part in a region of the cusps of the hypocycloid path; and

thereby simultaneously rotating the shaped part about an axis ~~thereof~~ of the shaped part.

Claim 2 (currently amended). The method according to claim 1, which comprises powder-pressing to form a pressed part, pre-sintering the pressed part at temperatures of < 900°C, then machining the pre-sintered part by milling, and then

fully sintering, and in the process hardening, the part at temperatures of between 1000°C and 1400°C.

Claim 3 (original). The method according to claim 1, which comprises forming the part with an Fe–based alloy containing ≥ 0.2% of C, and effecting the step of fully sintering at temperatures of between 1100°C and 1250°C.

Claim 4 (original). The method according to claim 1, which comprises forming the part with an Fe–based alloy containing ≥ 0.4% of C, and effecting the step of fully sintering at temperatures of between 1100°C and 1250°C.

Claim 5 (original). The method according to claim 1, which comprises hardening the part by rapidly cooling from a sintering temperature during the step of fully sintering.

Claim 6 (original). The method according to claim 1, which comprises forming the part with an Fe–based alloy containing < 0.3% of C, fully sintering the pressed part to form the finished shaped part under standard conditions, then machining the part by milling, and finally hardening the part, at least in a surface zone thereof, by case-hardening in a carbon-containing atmosphere.

Claim 7 (original). The method according to claim 1, which comprises forming the undercuts with a single-tooth milling cutter with an integer ratio between a mill revolution time through one cycloid path and one rotation of the part about the axis thereof.

Claim 8 (currently amended). The method according to claim 1, which comprises milling the part with a milling tool holder equipped with a tool for milling the undercut and with a ~~dedicated~~ tool for milling the functional recess.

Claim 9 (currently amended). A sliding sleeve for a motor vehicle transmission, comprising ~~a~~ the sintered shaped part produced in accordance with the method of claim 1.